

Applicant: Smith et al.  
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Remarks

Introduction

The claims have been amended. Claims 27 and 5 have been amended to more clearly set forth the subject matter of the invention. Claims 21-26 and 28 have been canceled. Applicants preserve the right to prosecute the subject matter of claims 21-26 and 28 in a continuation application. Claims 27, 5-6, and 20 are currently pending. Claim 27 is the sole independent claim.

Section 112 rejections

Claim 5

Claim 5 has been rejected under 35 U.S.C. §112, second paragraph as indefinite. The Examiner has stated that claim 5 lacks antecedent basis by including wherein the substituent on J may include unsubstituted alkyl. Claim 5 has been amended to delete the unsubstituted alkyl substituent. Therefore, reconsideration and withdrawal of the rejection of claim 5 under Section 112, second paragraph is respectfully requested.

Claims 23-25, 26, and 28

Claims 23-25, 26, and 28 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. The Examiner states that "the specification, while being enabling for the treatment of Alzheimer's disease does not reasonably provide enablement for the prevention of Alzheimer's disease or the treatment of any other disease applicant considers mediated by the inhibition of cellular production of amyloid B." Applicants respectfully submit that this rejection has been obviated by the cancellation of claim 23-25, 26 and 28.

Claims 21, 22 and 28

Claims 21, 22, and 28 have been "rejected under 35 U.S.C. §112, first paragraph, because the specification, while being enabling for the inhibition of proteolytic cleavage of amyloid beta precursor protein does not reasonably provide enablement for the modulating of the level of

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amyloid beta precursor protein. Applicants respectfully submit that the rejection of claims 21, 22, and 28 is obviated by the cancellation of these claims.

#### Section 102 Rejections

##### Claims 27, 5 and 20

Independent claim 27 and dependent claims 5 and 20 have been rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Linfield. et al. The Examiner asserts that compound 105 on page 1743 of Linfield includes substituents corresponding to the present invention as follows: wherein D is hydrogen, E is phenyl substituted with halogen (chlorine), G is phenyl substituted with a halogen (chlorine) and J is phenyl substituted with alkyl substituted alkyl (n-propyl.). Applicants respectfully submit that the amendment of claim 27 obviates these grounds of rejection.

Amended claim 27 includes only alkyl substituted with a substituent other than alkyl, and therefore excludes n-propyl as set forth in Linfield. Therefore, reconsideration and withdrawal of the rejections under Section 102 are respectfully requested.

#### Section 103 Rejections

##### Claims 27, 5-6, and 20

Claims 27, 5-6, and 20 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Linfield et al. ("Linfield"). The Examiner stated at page 15 of the Office Action dated August 16, 2004 that Linfield "does not disclose a species corresponding to the instant invention wherein D is hydrogen, E is phenyl substituted with halogen (chlorine), G is phenyl substituted with a halogen (chlorine) and J is phenyl substituted with methyl or halogen." The Examiner continues to allege that, "it would have been obvious to one of ordinary skill in the art when faced with Linfield et al. to prepare compounds of the instant invention wherein substituents on J is methyl or halogen." This rejection is respectfully traversed on the grounds that the Examiner has failed to establish a *prima facie* case of obviousness.

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In order to establish a *prima facie* case of obviousness, there must be (1) some teaching or suggestion to modify a reference, (2) a reasonable expectation of success, and (3) all of the limitations of the claims must be taught or suggested by the reference. The Examiner asserts at page 16 of the Office Action that "the motivation would stem from the desire to prepare other useful substituted sulfonanilides as antibacterial agents." However, no such teaching is present in Linfield, which in fact teaches away from the compounds of the present invention.

Linfield is a study of the antibacterial activity of certain substituted anilides of carboxylic and sulfonic acids. In the study, three structurally distinct carboxylic acids and one sulfonic acid were examined. Two of the sulfonic acid derivatives (compounds 104 and 105) were added to the study to confirm the findings of earlier research by Charles and Weller. See footnote 9. (Charles and Weller previously discovered the importance of the proton at the "R" position, with respect to antibacterial activity.)

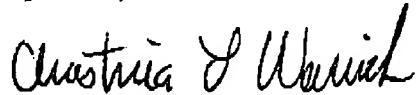
Compounds 104 and 105 are the only two compounds in the study wherein Linfield's "R" group, which the Examiner has alleged corresponds to the "-CHDG" group of the present invention, is not hydrogen. This is of paramount significance considering that Linfield "confirmed [Charles and Weller's] observation that replacement of the sulfonamide proton [R] by an alkyl group destroyed [antibacterial] activity." Page 1744 second column, line 7. In other words, Linfield teaches that if R is not hydrogen, the compound will not exhibit the desired activity. Therefore, one of skill in the art, following the teachings of Linfield, would have no motivation to prepare compounds of the present invention because "-CHDG" cannot be hydrogen.

Since Linfield fails as a proper reference under Section 103, reconsideration and withdrawal of the rejections under Section 103 are appropriate and respectfully requested.

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In view of the amendments and remarks set forth above, reconsideration and withdrawal of the rejections are appropriate and respectfully requested. Applicants submit the present claims are patentably distinct over the art and allowable in form. Early allowance is therefore solicited. The Examiner is encouraged to contact the undersigned attorney should there be any questions regarding this amendment.

Respectfully submitted,



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